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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,035	10/02/2003	Nobuhiro Takano	Q77756	6918
23373	7590	02/17/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			TIBBITS, PIA FLORENCE	
			ART UNIT	PAPER NUMBER
			2838	

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,035

Applicant(s)

TAKANO ET AL.

Examiner

Pia F. Tibbits

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10, 11 and 16 is/are allowed.
- 6) ☒ Claim(s) 8, 9, 12, 13, and 15 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/676,035.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

This Office action is in answer to the amendment filed 11/29/2004, and the RCE filed 1/13/2005. Claims 8-16 are pending, and claims 8, 9, 10, and 11 are amended.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 12, 13, and 15 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U. S. Patent No. 6683439. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both describe a DC power source unit used as a power source of an electrically powered tool, the tool having a power switch, the DC power source unit comprising: charging means for charging a battery pack used as an alternative power source of the tool; a power output switch circuit for switching between supplying the DC power to the tool and supplying DC power to the battery pack for charging the battery pack; a battery condition detecting means for detecting a condition of the battery pack and outputting a condition signal indicative of the condition of the battery pack; a controller that receives the condition signal from the battery condition detecting means and determines that the battery pack is fully charged when the condition signal has reached a predetermined value, **wherein the controller receives the condition signal from the battery condition detecting means and determines that the battery pack is fully charged regardless of whether the charging means is supplied with the DC power.**

Claim Rejections - 35 USC § 103

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8, 9, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over prior art disclosed by applicant **JP-2000184614** [hereinafter JP] in view of **Sakakibara et al.** [hereinafter Sakakibara] [6075347].

The newly added limitation "wherein said detection continues when said battery pack is being currently charged or when said DC voltage from said DC power source is being supplied to said tool and charging of said battery pack is being interrupted" in view of the specification, which describes "computation of the temperature gradient for the dT/dt detection is to compute the temperature gradient continuously regardless of whether the battery pack 5 is being currently charged or charging of the battery pack 5 is being interrupted. By doing so, even if the cordless power tool is operated when the battery pack 5 has been charged to a nearly fully charged condition, a fully charged detection of the battery pack 5 can be made based on the battery temperature regardless of whether or not the charging current actually flows". Therefore the claim must be given the broadest reasonable interpretation **consistent** with the supporting description. *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).

JP discloses a DC power source unit 2 used as a power source of an electrically powered tool 4, the tool having a chargeable battery pack 5 used as an alternative power source of the tool and a power switch 42, where a DC voltage is supplied from said DC power source 2 to said tool 4 when said power switch 42 is turned on, said DC voltage is supplied from said DC power source to said rechargeable battery pack 5 to charge said battery pack 5, when said power 42 switch is turned off, and a battery condition is detected as to whether or not the battery pack has been fully charged by a microcomputer

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2C. JP does not disclose specifically detection continues when said battery pack is being currently charged or when said DC voltage from said DC power source is being supplied to said tool and charging of said battery pack is being interrupted.

Sakakibara discloses continuously monitoring the absolute temperature T and temperature difference dT/dt of a battery powering a tool while narrowing down charging current. It is, therefore, possible to fully charge the battery without fear of overcharge [see column 9, lines 36-40]. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify JP's apparatus and include continuous detection and monitoring of the temperature of a battery powering a tool, as disclosed by Sakakibara, in order to avoid a temperature-dependent irreversible deterioration of the battery and make it possible to fully charge the battery without fear of overcharge.

As to the claim 9: see remarks and references for claim 8 described above.

With respect to the method claims 8 and 9: the method steps will be met during the normal operation of the apparatus described above.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Response to Arguments

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new grounds of rejection. Applicant amended claims 8, 9, 10, and 11, which is new issue.

Allowable Subject Matter

7. Claims 10, 11 and 16 allowed.

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With regard to claims 10, 11 and 16: none of the references of record prior to applicant's filing date disclose, teach, or suggest, and it would not have been obvious to a person of ordinary skill in the art to provide a method for controlling a DC power source unit used as a power source of an electrically powered tool, the tool having a chargeable battery pack used as an alternative power source of the tool and a power switch, the method comprising, *inter alia*, the steps of measuring a period of time during which an on/off switch is continuously held in off state, and supplying a DC voltage from the DC power source to the chargeable battery pack to charge the battery pack, when the measured time period exceeds a predetermined period of time.

8. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With regard to claim 14: none of the references of record prior to applicant's filing date disclose, teach, or suggest, and it would not have been obvious to a person of ordinary skill in the art to provide a method for controlling a DC power source unit used as a power source of an electrically powered tool, the tool having a chargeable battery pack used as an alternative power source of the tool and a power switch, the method comprising, *inter alia*, the steps of measuring a period of time during which an on/off switch is continuously held in off state, and supplying a DC voltage from the DC power source to the chargeable battery pack to charge the battery pack, when the measured time period exceeds a predetermined period of time.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related apparatus.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Pia Tibbits whose telephone number is (571) 272-2086. If unavailable, contact the Supervisory Patent Examiner Mike Sherry whose telephone number is (571) 272-2084. The Technology Center Fax number is (703) 872-9306.

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11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PFT

February 14, 2005

Pia Tibbits

Primary Patent Examiner

